Maternal Hyperglycemia Tied to High Fetal Insulin

BY MARY ANN MOON Contributing Writer

San Francisco — Check serum bile acid levels to determine if severe itching during pregnancy is the result of intrahepatic cholestasis of pregnancy, advises a dermatologist pathologist.

“Intrahepatic cholestasis of pregnancy is about the only dermatosis of pregnancy that has poor outcomes for the unborn,” Dr. Senait W. Dyson said at a meeting sponsored by Skin Disease Education Foundation.

An uncommon problem in the United States, intrahepatic cholestasis of pregnancy (also called prurigo gravidarum or obstetric cholestasis) is a reversible form of cholestasis that presents in late pregnancy and persists until delivery.

The disease increases the risk of intrauterine fetal distress and leads to a three- to fourfold increase in the risk of stillbirth.

It typically presents during the third trimester and resolves within days after delivery. Clinically, the problem is characterized by generalized, severe pruritus without primary skin lesions, said Dr. Dyson, director of dermatopathology at the University of California, Irvine.

In pallor of the palms and soles is common. You’ll seldom see jaundice with intrahepatic cholestasis of pregnancy.

The main diagnostic finding is increased serum bile acids in all cases, resulting from impaired bile flow. Elevated serum bile acid levels greater than 4.07 mcg/mL (10 micromol/L) in these patients can reach as high as 16 mcg/mL (40 micromol/L), she said.

Some patients will have abnormal liver function tests. Histology is nonspecific. Immunoassay tests will be negative.

Prolonged disease causes vitamin K deficiency and increases the risk for bleeding in the mother. It is not clear whether the bleeding risk increases in the infant. Check prothrombin times in women with intrahepatic cholestasis of pregnancy. Dr. Dyson advised that women with increased prothrombin times should get vitamin K injections.

“Treatments that I use for other cholestasis diseases are not helpful in this condition,” she noted.

Antihistamines will help control the pruritus. Ursodeoxycholic acid (UDCA), the only approved medication to treat primary biliary cirrhosis, also helps improve pruritus in patients with intrahepatic cholestasis of pregnancy. Dr. Dyson said that most medical centers, including her institution, dose UDCA at 14 mg/kg per day t.i.d. to treat intrahepatic cholestasis of pregnancy from the time of diagnosis until delivery. Some clinicians suggest that dosages as high as 20-25 mg/kg per day t.i.d. might be better.

Delivery by 38 weeks’ gestation is advisable, and some physicians suggest elective delivery by 37 weeks to decrease the risk of stillbirth, but it’s not clear whether the potential benefits of delivering at 37 weeks outweigh the risks from preterm delivery, Dr. Dyson said.

“It’s definitely agreed that patients should have frequent nonstress tests and biophysical profiles to assess for fetal stress starting at 34 weeks’ gestation,” she said.

The incidence of intrahepatic cholestasis of pregnancy worldwide ranges from 10 to 760 cases per 10,000 pregnancies, with a higher incidence seen in South America (especially in Chile and Bolivia) and low rates in the United States and Europe.

Dr. Dyson reported having no conflicts of interest.

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Consider Using FFP Earlier in Cases of Massive Transfusion

BY CAROLYN SACHS Contributing Writer

WAIKILOA, HAWAII — Early administration of fresh frozen plasma to address coagulopathy can potentially reduce mortality, according to a study of 97 patients who received massive transfusions.

Although hemorrhage is still a major cause of early mortality in trauma patients, it is commonly believed that patients are not coagulopathic when they arrive in the emergency department, and that coagulopathy develops over time, said Dr. Swaminatha Mahadevan, who is associate chief of emergency medicine at Stanford (Calif.) University.

However, recent studies suggest that patients are coagulopathic when they “hit the ED door,” Dr. Mahadevan said at a symposium on emergency medicine sponsored by Stanford University.

“Most massive transfusion protocols don’t address this,” he added.

In Stanford’s massive transfusion protocol, and in many such guidelines throughout the United States, fresh frozen plasma (FFP) is not given until the patient has received 4-6 U of blood, Dr. Mahadevan said.

In his presentation, Dr. Mahadevan referred to findings from a published study done at the University of Texas, Houston, which pointed to the need for earlier administration of FFP (J. Trauma 2007;62:112-9).

The University of Texas investigators reviewed data on 97 severely injured patients who required a massive transfusion of at least 10 U of packed red blood cells during their first 24 hours in the university hospital. “These patients were sick enough that they eventually had to go to the operating room, or to interventional radiology, to stop the bleeding,” Dr. Mahadevan said.

All of the patients studied were found to have had severe coagulopathy on arrival at the ED, with international normalized ratios (INRs) of 1.8, plus or minus 0.2. Nevertheless, Dr. Mahadevan noted, because of the way the massive-transfusion guidelines have been set up, none of the patients received FFP until after they received 6 U of packed red cells.

Upon arrival in the ICU following initial resuscitation in the ED, the patients’ INRs were still high (1.6, plus or minus 0.1).

Finally, they would start receiving packed red cells and FFP in a 1:1 ratio, Dr. Mahadevan said.

The patients were still moderately coagulopathic 8 hours later, he noted, with a mean INR of 1.4, plus or minus 0.3.

The University of Texas study found that the severity of coagulopathy on ICU admission correlated with an increase in mortality. Dr. Mahadevan observed.

If your INR was greater than 2, you had a 50% mortality, which, obviously, is significant,” he commented.

Learning from this study, Dr. Mahadevan stressed that “we should be assuming that these patients are coagulopathic, and we should be giving FFP right out of the gates,” with an initial transfusion in a 1:1 ratio with packed red blood cells.

Based on the study’s findings, the University of Texas investigators influenced the hospital to revise its massive-transfusion protocol for severe bleeding, Dr. Mahadevan noted.